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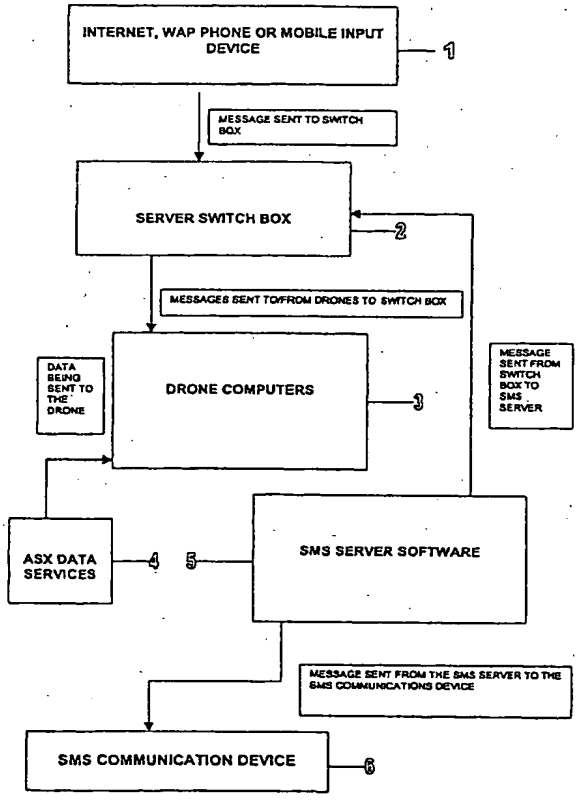
(54) Title: A TRADING SYSTEM



(57) Abstract: A trading system whereby a user device to input stock market technical analysis makes requests from a computer terminal, wireless device or other electronic medium with intent to receive stock market technical analysis alerts from a server through wireless or land-line communication means.

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— *with amended claims*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

A TRADING SYSTEM

TECHNICAL FIELD

The present invention relates to a trading system which combines stock market technical analysis and indicators, as well as the field of information technology in mobile communications.

BACKGROUND ART

There are many individuals and organisations with an interest in the stockmarket for whom up-to-the minute stockmarket information is of vital importance.

It is also important that they are able to contact their dealers or brokers to provide instructions for share market transactions on an instantaneous basis.

Most individuals in particular who may have other occupational or hobby interests which take them away from or out of communication with stock market events can be severely disadvantaged if an event such as a sudden downward adjustment to share values takes place without their knowledge.

Stock market technical analysis is becoming increasingly sophisticated and measures of events based on technical analysis indicators e.g."moving averages," "RSI", "stochastic osillator" and the like are extensively used to analyse sharemarket price and time data and for share portfolio management.

The forms of analysis involves the measurement of share prices against small blocks of time.

The analysis can be communicated to stock holders numerically and/or graphically via computers or television monitors.

Most investors have access to personal communication systems such as cellular telephones and other digital apparatus operated by wireless technologies.

It is an object of the present invention to transmit stockmarket technical analysis indicators, and corresponding alerts in relation to the data created by technical analysis where the transmission of all data is handled

through wireless technology, currently expressed as WAP (wireless application protocol) and SMS (short message service) to send and receive various types of stockmarket information using wireless technology and digital television transmission.

Further objects and advantages of the present invention will now become apparent from the ensuing description which is given by way of example only.

DISCLOSURE OF INVENTION

According to the present invention there is provided a method of share trading comprising the steps of:

(a) a provider receiving stockmarket data on a network of computers,

(b) a user instructing a provider to forward to it stockmarket technical analysis criteria via a second system, and

(c) the provider providing a message to the user of requested stock market events via the second system.

A user can instruct the provider to provide technical analysis criteria for specific stocks.

A user can instruct the provider to provide technical analysis criteria of overall stock market trends.

The second system can comprise a users fixed or mobile telephone, a personal computing device, a facsimile or pager of the user.

The network of computers can include components that receive user input commands for a software environment component residing on the network of computers controlled by the users second system.

The users second system can be capable of wireless or land line communications.

The users second system software component can send input commands to a software environment that is running on the network of computer systems.

In response to the input command the software environment sends a local input command to a software environment component that processes the commands which responds by issuing a local output command to a server

infrastructure which in turn sends a remote output command to the users second system.

In response to remote output commands the second system can cause an output from the system consisting of stock market technical analysis information and stock market alerts.

A plurality of integrated and related systems can be provided to achieve information transfer.

The systems and relationships can be as follows;

(i) From an Internet software, Wap enabled phone or mobile input device.

The user sends a message or command from a second system device, which is then intercepted by the switching box.

The message may contain data: including information about how to setup the users watches, requests for specific data or login information.

(ii) A server switch box can receive all messages sent from any computer or device connected or connecting to the system.

The function of the switch box can be to:

(1) find the least busy drone computer within a network to process a specific command or watch.

(2) route alerts to an sms server to be sent to clients computers or mobile handsets.

(3) Send requested information between drone computers.

(iii) Drone computer systems as part of the network are each connected via a local area network using the tcp/ip protocol (internet protocol). The drones are directly connected to the exchange data server. The drone has two main purposes they are as follows:

(1) To accept, process and return static stockmarket data which a user has requested from the service.

(2) To repetitively calculate users requested "watch data" (an event set by the user to trigger an alert which is sent to the users mobile or static device).

The watch data can consist of: a simple, price/volume or price plus

volume watch or a technical analysis request, e.g. trend line drawing, moving average alerts, as well as other well documented technical analysis systems.

(iv) Sms server software receives a message from a drone routed through the switch.

Once the sms server software receives the message, the sms server finds the corresponding users data (i.e. phone number, name) and passes the message as well as the correct phone number to send the message, to the sms communications device.

(v) An sms communications device receives a message from the sms server and broadcasts it to the mobile communications device.

In an alternative embodiment of the present invention one or more "history servers" can be added, the purpose of which is to provide data to any of the computers connected to the network.

The history server is in place so that it can act as a gateway to the exchange data feed.

The history server scoops all of the data out of the data feed as it comes along, so that the data never needs to be requested from an outside source more than once.

All servers connected to the network request their data from the history server.

The drones are no longer directly connected to the exchange data feed, they are in fact connected to the switchbox and request their data from the new history server.

A central data storage has been created to house the databases created by the history server.

Each history server connected to the system uses these databases (located on another computer) so that cohesion remains throughout the network.

BRIEF DESCRIPTION OF THE DRAWINGS

Aspects of the present invention will now be described with reference to the accompanying schematic drawings in which;

Figure 1 illustrates how elements of a computer system can be

related according to one aspect of the present invention, and

Figure 2 illustrates an alternative extended computer system to that of figure 1.

With respect to figure 1 of the drawings, element 1 sends a message to the switch box about what kind of data to view or what kind of indicators to add.

Element 2 the server switch box receives a message from the internet, A WAP enabled phone or mobile input device. It then finds the least busy drone computer and sends that message to that computer to be processed.

The switch also processes logins and logoffs of the SMS server, drone computers and remote.

Element 3 a series of computers connected via a network (LAN) which is also connected to the exchange data server and switch systems.

The drone processes messages from the users (sent via the switch). These messages are technical indicator instructions. The drone then analysis the stock market at a specified internal and applies the users chosen technical and analysis indicators formulas to the data. If the data is a valid technical response (e.g. price has reached) the drone sends a message to the switch which then sends it to the SMS server.

Element 4 data is fed from the exchange to the drone computers. (when requested to do so by the drone).

Element 5 receives a message from a drone computer, which is routed through the switch box.

The message tells the SMS server to find out what phone to send a message to.

The SMS server then contacts the SMS communications device and tells it to send the appropriate alert.

Element 6 receives message from the SMS server and broadcasts it to the mobile phone number sent to it from the SMS server.

With respect to figure 2 of the drawings asn internal server infrastructure can comprise the components illustrated and described below;

Gateway: The gateway is one of two parts directly connected to the Internet it allows users and network appliances to connect to their correct server.

Guardian: The guardian keeps track of all major servers on the network. Major servers being single within the given locality. The guardian also has the ability to funnel small amounts of data from load management tools and administrator tools directly to the switchbox for routing and processing.

Alert Manager: The alert manager stores and distribute all created alerts to the least busy drone computer.

Administration tool: The administration tool allows a third party administrator to connect to the system and edit, remove or add users without interrupting the flow of data around the rest of the system.

INS: The INS stores all of the users details, including usernames, passwords and financial data. The INS is a request only server from the major side of the network, and data inside it can only be changed from the administrator tool.

Switch: The switch server(s) are a routing device which routes packets from one server to the other. Any switches main job is keeping the network free from traffic bouncing between many erroneous servers before getting to its destination. Switchboxes are also used to apply "load balancing" to components of the network which are connected to it.

History Client: The history client(s) contain a large database of stock market data which is stored every time a trade is made on the stock market. The history client is a request only client which feeds data from itself to the requesting party, be it an internal server or external device.

Alert Client: The alert client(s) do all of the mathematical calculations for alerts currently running on the system. The alert client(s) request data from the history client(s) and process that data through a series of events. The alert client(s) are responsible for generating the final alert which is sent via the output service.

Output Service: The output service is the network connection

software and hardware which connects the network of computers to an output device.

There are two major advantages of the present invention;

(1) Technical Analysis indicators can be applied to a stock(s) or stockmarket data and boast programming which can inform you of an "indicated" signal to do whatever the indicator was designed to inform the user of, without the user having to ponder over the data themselves.

(2) Technical analysis indicators can be set to "repeat" over a certain period and can be told to alert the user when an "event" happens, via wireless or non wireless technology wherever the user may be.

The features of the system which result in the advantages mentioned above are as follows:

(1) The system is online while an exchange is open. All day, everyday.

(2) The system can more quickly apply thousands of formulas and indicators to stock market data.

(3) The system is more accurate and mathematical in its interpretation of results.

(4) The system can be designed to be "set" and "run". (e.g. the user sets up their indicators and can be alerted of them until it is told to be stopped).

Aspects of the present invention have been described by way of example only and it will be appreciated that modifications and additions thereto may be made without departing from the scope thereof, as defined in the appended claims.

CLAIMS:

1. A method of share trading comprising the steps of:
   (a) a provider receiving stockmarket data on a network of computers,
   (b) a user instructing a provider to forward to it stockmarket technical analysis criteria via a second system, and
   (c) the provider providing a message to the user of requested stock market events via the second system.

2. A method of share trading as claimed in claim 1 wherein the user instructs the provider to provide technical analysis criteria for specific stocks.

3. A method as claimed in claim 1 wherein the user instructs the provider to provide technical analysis criteria of overall stock market trends.

4. A method as claimed in claim 1 wherein the second system comprises a users fixed or mobile telephone, a personal computing device, a facsimile or pager of the user.

5. A method as claimed in claim 1 wherein the network of computers includes components that receive user input commands for a software environment component residing on the network of computers controlled by the users second system.

6. A method of share trading as claimed in claim 1 wherein the users second system is capable of wireless or land line communications.

7. A method of share trading as claimed in claim 1 wherein the users second system software component sends input commands to a software environment that is running on the network of computer systems.

8. A method of share trading as claimed in claim 7 wherein in response to the input command the software environment sends a local input command to a software environment component that processes the commands which responds by issuing a local output command to a server infrastructure which in turn sends a remote output command to the users second system.

9. A method of share trading as claimed in claim 1 wherein, in response to remote output commands the second system causes an output from the system consisting of stock market technical analysis information and stock market alerts.

AMENDED CLAIMS
[received by the International Bureau on the 02 April 2002 (02.04.2002)]
Claims 1 to 9 replaced by new claims 1 to 9

1. A method of informing users of stockmarket events comprising the steps of:
   (a) a provider receiving stockmarket data on a network of computers,
   (b) a user instructing a provider to forward to it contemporary stockmarket technical analysis criteria via a remote communications device, and
   (c) the provider providing a message to the user of requested stock market events via the remote communications device.

2. A method as claimed in claim 1 wherein the user instructs the provider to provide technical analysis criteria for specific stocks.

3. A method as claimed in claim 1 wherein the user instructs the provider to provide technical analysis criteria of overall stock market trends.

4. A method as claimed in claim 1 wherein remote communications device comprises a users fixed or mobile telephone, a personal computing device, a facsimile or pager.

5. A method as claimed in claim 1 wherein the network of computers includes components that receive user input commands for a software environment component residing on the network of computers controlled by the users remote communications device.

6. A method as claimed in claim 1 wherein the users remote communications device is capable of wireless or land line communications using existing communications systems to transmit contemporary technical analysis criteria.

7. A method as claimed in claim 1 wherein the users remote communications device software component sends input commands to a software environment that is running on the network of computer systems.

8. A method as claimed in claim 7 wherein in response to the input command the software environment sends a local input command to a software environment component that processes the commands which responds by issuing a local output command to a server infrastructure which

In turn sends a remote output command to the users second system.

9. A method as claimed in claim 1 wherein, in response to remote output commands the second system causes an output from the system consisting of stock market technical analysis information and stock market alerts.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU01/01380

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Derwent Abstract Accession No. 2000-310686, JP 2000092537 A (KOKUSAI DENKI KK) 31 March 2000 Abstract	1-9
X	Derwent Abstract Accession No. 1999-363918 JP 11136365 A (HITACHI LTD) 21 May 1999 Abstract	1-9
A	WO 00/07385 A (HIGHWAYMASTER COMMUNICATIONS, INC.) 10 February 2000 Page 26, lines 3-13	
P,X	WO 200165339 A (CLICKSERVICES.COM) 7 September 2001 Whole document	1-9
P,X	WO 200161589 A (PAINEWEBBER INC.) 23 August 2001 Whole document	1-9
P,X	WO 200154016 A (ATTRACTOR HOLDINGS LLC) 26 July 2001 Whole document	1-9
P,X	WO 200142884 A (FINKELMAN) 14 June 2001 Whole document	1-9
P,X	WO 200078067 A (TELEFONAKTIEBOLAGET ERICSSON) 21 December 2000 Whole document	1-9
P,X	US 6260148 A (MICROSOFT CORP.) 10 July 2001 Whole document	1-9

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/AU01/01380

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member					
WO	200001172	AU	84409/98	EP	1092327		
WO	9948250	AU	30131/99	EP	1062769		
WO	200011587	JP	9157236	US	6071968		
WO	200007385	AU	54611/99	EP	1101375	US	6167255
WO	200165339	NONE					
WO	200161589	AU	200129657	AU	200129660	WO	200161590
WO	200154016	AU	200126027				
WO	200142884	AU	200147164				
WO	200078067	AU	45133/99				
US	6260148	EP	1023663	US	5943478	WO	9845781

END OF ANNEX

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU01/01380

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. [7]: G06F 17/60 H04Q 7/22

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

KEYWORDS: SHARE, FORWARD, MESSAGE, MOBILE, NETWORK AND SIMILAR TERMS

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPAT

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 00/01172 A (NOKIA NETWORKS OY) 6 January 2000 Page 3, lines 5-6	1-9
X	WO 99/48250 A (MOSTERT) 23 September 1999 Page 3, lines 15-18	1-9
X	WO 00/11587 A (MARKETXT, INC.) 2 March 2000 Figure 5	1-9

[X] Further documents are listed in the continuation of Box C [X] See patent family annex

* Special categories of cited documents:

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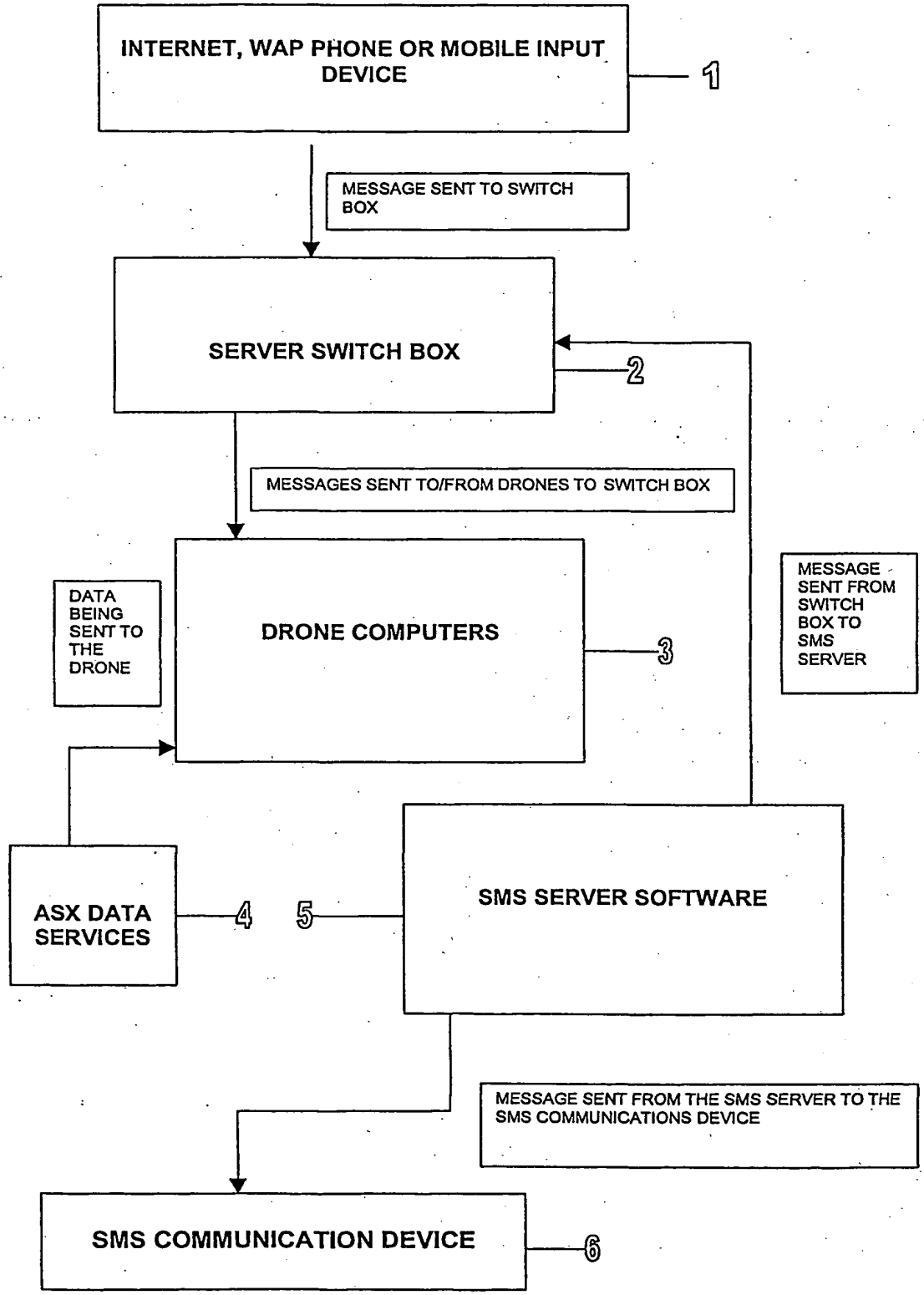
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

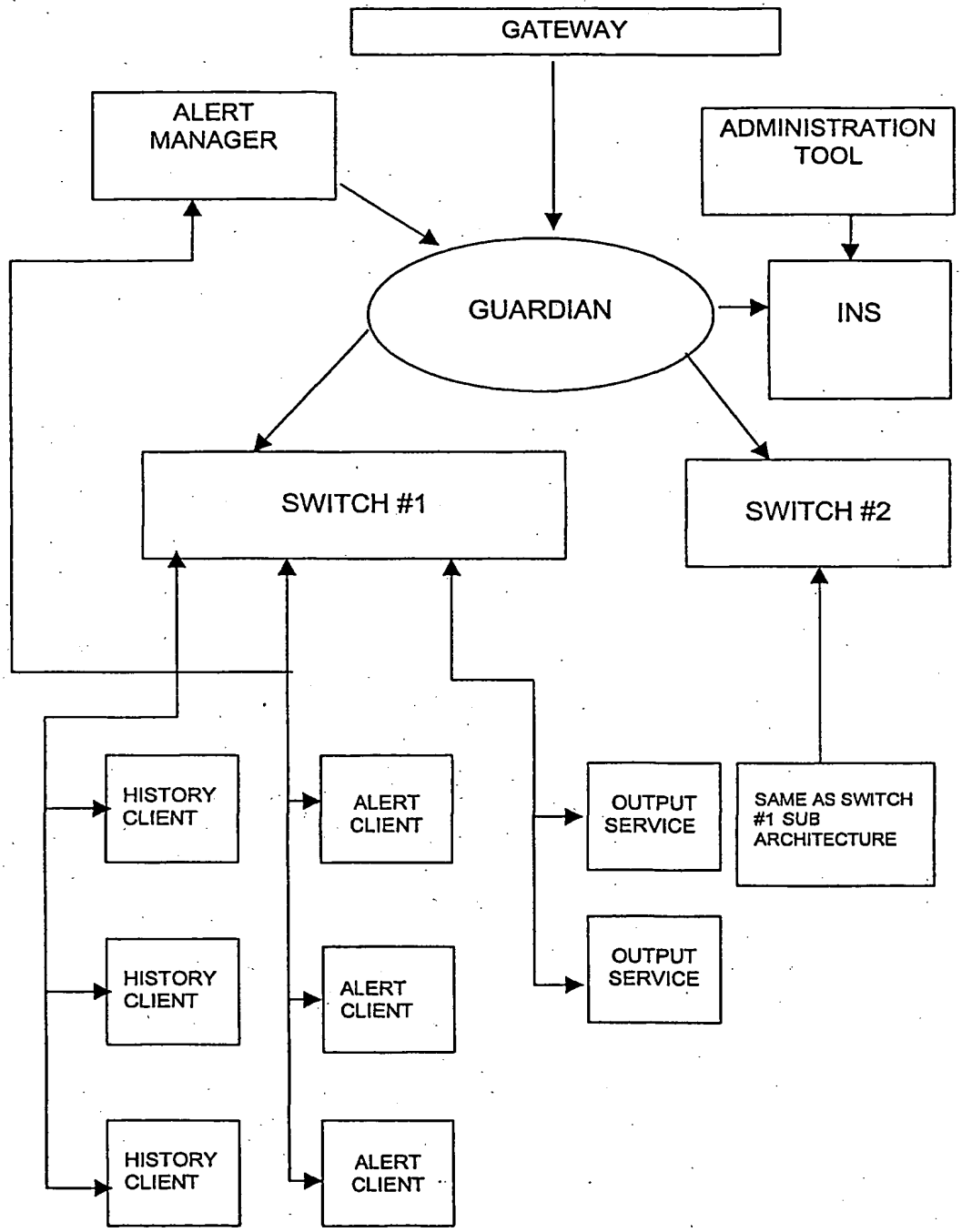
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
29 January 2002	- 7 FEB 2002
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929	Authorized officer ROSEMARY LONGSTAFF Telephone No : (02) 6283 2637


INTERNET, WAP PHONE OR MOBILE INPUT DEVICE
1
MESSAGE SENT TO SWITCH BOX
SERVER SWITCH BOX
2
MESSAGES SENT TO/FROM DRONES TO SWITCH BOX
DATA BEING SENT TO THE DRONE
DRONE COMPUTERS
3
MESSAGE SENT FROM SWITCH BOX TO SMS SERVER
ASX DATA SERVICES
4
5
SMS SERVER SOFTWARE
MESSAGE SENT FROM THE SMS SERVER TO THE SMS COMMUNICATIONS DEVICE
SMS COMMUNICATION DEVICE
6


GATEWAY
ALERT MANAGER
ADMINISTRATION TOOL
GUARDIAN
INS
SWITCH #1
SWITCH #2
HISTORY CLIENT
HISTORY CLIENT
HISTORY CLIENT
ALERT CLIENT
ALERT CLIENT
ALERT CLIENT
OUTPUT SERVICE
OUTPUT SERVICE
SAME AS SWITCH #1 SUB ARCHITECTURE